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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jin-ho Park

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EXAMINER

HUFFMAN, JULIAN D

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/671,940	<b>Applicant(s)</b> PARK ET AL.	
	<b>Examiner</b> Julian D. Huffman	<b>Art Unit</b> 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-32 and 40 is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11 and 41 is/are rejected.
- 7) ☒ Claim(s) 9 and 42 is/are objected to.
- 8) ☒ Claim(s) 12-24 and 33-39 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Claims 12-24 and 33-39 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 29 September 2005.

### ***Claim Objections***

Claim 42 is objected to because of the following informalities:

Claim 41, from which claim 42 depends, recites first and second support beams and not first support beams and second support beams.

Claims 42 recites the first support beams and the second support beams. Applicant should further clarify either claim 41 or 42 to provide proper antecedent basis for "the first support beams" and "the second support beams".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Meyer (U.S. 6,239,817 B1).

Meyer discloses:

With regards to claim 1, a printer (fig. 1) comprising:

an ink head (26) comprising a nozzle unit (27) to eject ink drops in a shingling mode providing edge printing (the nozzle units are capable of being controlled so as to eject ink droplets in a shingling mode)

an ink collector (30) positioned under paper to correspond to the nozzle unit and having first and second wall portions to enclose a space to collect ink therebetween (upstream and downstream walls); and

first and second support beams (72-82 and 84-94, fig. 2) connected to and extending away from inner portions of the first and second wall portions of the ink collector which face each other in the paper feed direction and in an opposite direction to the paper feed direction, respectively, and alternately arranged with each other in a scan direction (even and odd beams may serve as first and second beams, the even and odd beams alternating in the scan direction).

With regards to claim 2, the first and second support beams are extended in the paper feeding direction by first and second lengths, respectively, the first length comprises a first paper contact portion and a first paper non-contact portion shorter than the first paper contact portion, and the second length comprises a second paper contact

portion and a second paper non-contact portion shorter than the second paper contact portion (since each beam is angled, it has portions with varying lengths/heights, and the lengths/heights are capable of contact or not contacting the paper in the manner claimed).

With regards to claim 3, the first and second support beams extend to have the same length to support the paper (fig. 1).

With regards to claim 4, an end point of the first support beam and an end point of the second support beam face each other in the scan direction (figs. 2 and 3).

With regards to claim 5, the end point of the first support beam extends in the paper feed direction to interlace with that of the second support beam (since the first and second support beams are formed alternately in the scan direction, they interlace with one another).

With regards to claims 6 and 7, the first and second support beams have the same height in a direction toward the ink head, the direction perpendicular to the paper feed direction and the scan direction (fig. 3).

With regards to claim 8, the first and second support beams extend from barriers, which partition the ink collector (fig. 3).

With regards to claim 11, the second support beam has a slant end portion inclining in the paper feed direction (figs. 2 and 3).

Claims 1 and 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Kodama et al. (U.S. 2005/0078147 A1).

Kodama et al. discloses :

With regards to claim 1, a printer comprising:

an ink head comprising a nozzle unit to eject ink drops in a shingling mode providing edge printing (the nozzle units are capable of being controlled so as to eject ink droplets in a shingling mode)

an ink collector (fig. 22) positioned under paper to correspond to the nozzle unit and having first (3) and second (10) wall portions to enclose a space to collect ink therebetween; and

first and second support beams connected to and extending away from inner portions (14b, 10) of the first and second wall portions of the ink collector (38) which face each other in the paper feed direction and in an opposite direction to the paper feed direction (fig. 21, the beams extend in both directions), respectively, and alternately arranged with each other in a scan direction (the first support beams may be the odd beams, while the second support beams may be the even beams).

With regards to claim 41, a printer comprising:

an ink head having a nozzle unit to eject ink drops (fig. 1);

an ink collector (fig. 22) positioned under paper to correspond to the nozzle unit and having first and second opposing and upright wall portions (10, 14b) to enclose a defined space to collect ink; and

first and second support beams (38) connected to and extending away from the first and second opposing wall portions of the ink collector in a paper-feed direction and an opposite direction to the paper feed direction, respectively, to segment the defined

space of the ink collector without partitioning the defined space (figs. 21 and 22, consider a central portion of the walls 14b and 10 as the opposing wall portions; the support beams are connected to these wall portions and extend from them in the feed direction and opposite the feed direction).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer in view of Matsushashi.

Meyer discloses everything claimed with the exception of a second support beam with a round end portion.

Matsushashi discloses support beams with round end portions (fig. 8, 214).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the beam of Meyer so as to have a round end portion as taught by Matsushashi for the purpose of providing a smooth path for the print medium to travel thereby providing a more constant feed.

***Response to Arguments***

**Rejection under 35 USC 102 to Meyer**

The examiner does not agree that the cockle ribs of Meier extend in only the vertical direction. They have dimensions in the paper feed direction and in a direction opposite to the paper feed direction.

Applicant argues that Meyer does not disclose "first and second support beams connected to and extending away from inner portions of the first and second wall portions of the ink collector which face each other in the paper feed direction and in an opposite direction to the paper feed direction". However, this language is indefinite. Applicant argues that the ribs of Meyer extend in a vertical direction and are not connected to and extending away from inner portions of the first and second wall portions of the ink collector which face each other. However, by extending in the vertical direction above the walls, Meyer's ribs extend away from inner portions of the first and second wall portions of the ink collector which face each other. Therefore this argument is not persuasive.

**Rejection under 35 USC 102 to Kodama**

Applicant argues that the ribs of Kodama extend only in the scanning direction. Similar to Meyer, the ribs of Kodama are not one dimensional. They also extend in the paper feed direction, and the opposite direction. The structure 14b and 10 forms walls of the ink collector and the ribs extend from these walls in the claimed directions.



The examiner disagrees that the ribs must extend away from top and bottom portions of the hole 2 of Kodama.

The rejection of claim 40 as being anticipated by Kodama is withdrawn since Kodama does not disclose support beams extending away from the first wall portion of the ink collector and toward the second wall portion in a paper-feed direction.

### ***Allowable Subject Matter***

Claims 25-32 and 40 are allowed.

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (571) 272-2147. The examiner can normally be reached on 10:00a.m.-6:30p.m. Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Julian D. Huffman/  
Primary Examiner, Art Unit 2853